

FROM :

PHONE NO. : 7034184777

Sep. 30 2004 06:13PM P1

ISAAC A. ANGRES, Ph.D.

Registered Patent Agent
2001 Jefferson Davis Hwy
Suite 301
Arlington, VA 22202

Telephone (703) 418-2777
Telefax (703) 418-4777

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FACSIMILE COVER SHEET

TO: Examiner Layla Lachman,

RE: USN 10/009,890

FROM: ISAAC ANGRES / Eugene Ruiz

DATE: 9/30/04

TOTAL NUMBER OF PAGE(S) 11 (INCLUDING COVER SHEET)

MESSAGE: Letter regarding non-compliance + amendment
of January 8, 2004.

Isaac Angres

Reg-No. 29,705

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SEP 30 2004

USSN 10/009,890
Docket No. 21195.PUS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re of the Application of

Stefan Schmidt

Serial Number: 10/009,890

Filed: April 8, 2002

For: ARRANGEMENT FOR OPTICAL
EVALUATION OF AN OBJECT
ARRAY

Group Art Unit: 2877

Examiner: Layla G. Lauchman

LETTER ON THE SUBJECT OF NON-COMPLIANCE

Hon. Commissioner of Patents
and Trademarks
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to the undersigned telephone conversation with Examiner Lauchman, Applicant believes that the amendment filed on January 8, 2004 was in compliance with the new rules for claim amendment practice.

Background

The instant application was filed as a National phase application from PCT/EP00/03306 on April 8, 2002. On July 29, 2002 a preliminary amendment was filed (under the old claim amendment practice) canceling claims 1-14 and adding new claims 15-27.

As a result of this cancellation under the old amendment practice the only claims on record at the time of Examination were claims 15-27. Under the old amendment practice claims are gone forever and did not need to be listed in the new listing of claims.

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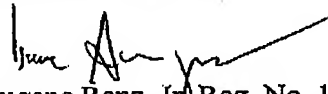
Upon Examination on the merits, claims 15-27 were the only claims examined. As a matter of record the Examiner only mentions claims 15-27 as pending in the first office action without acknowledgement that claims 1-14 were canceled. Applicants' conducted an interview with Examiner Lauchman on 12 November 2003, wherein agreement was reached as to claim 15.

A response was filed on January 8, 2004 under the new claim amendment practice which became effective on July 30, 2003. Since claims 1-14 were canceled under the old amendment practice and it was done prior to examination, it is believed that those claims need not be listed as they were not examined as part of the first office action. It should be noted that the office action was issued on August 8th, 2003; (after the new amendment practice went into effect) and no objections were raised by the Examiner regarding the listing of claims. Accordingly, it is believed that the response filed on January 8, 2004 was proper and in compliance.

Applicant received an official communication mailed Feb. 6, 2004 regarding non-compliance however the notice itself was lacking as to what part of the response filed on January 8, 2004 was non-compliant.

Applicant respectfully requests that the amendment submitted on January 8, 2003 be re-entered or at the very least a new non-compliant notice be reissued indicating what part of the amendment was non-compliant. A copy of Applicants amendment is being filed with this communication.

Respectfully submitted,


Eugene Renz, Jr. Reg. No. 19,557
Isaac Angres Reg. No. 29,765

Sept. 22, 2004

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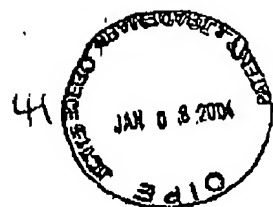
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USSN 10/009,890
Docket No. 21195.PUSIN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re of the Application of

Stefan Schmidt

Serial Number: 10/009,890

Filed: April 8, 2002

For: ARRANGEMENT FOR OPTICAL
EVALUATION OF AN OBJECT
ARRAY.

Group Art Unit: 2877

Examiner: Layla G. Lauchman

AMENDMENTHon. Commissioner of Patents
and Trademarks
Alexandria, VA 22313-1450

Dear Sir:

In response to the Office Action dated August 8, 2003, applicant respectfully requests reconsideration of the present application in view of the following amendments and remarks.

The Commissioner is hereby authorized to charge any deficiencies and credit any overpayments to Deposit Account Number 18-0990.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper. The Remarks/Arguments begin on page 5 of this paper.

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0003

USSN 10/009,890
Docket No. 21195.PUS**-- IN THE CLAIMS --**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

15. (original) Arrangement for optical evaluation of an object array (1) comprising a detector array (7), a microlens array (2), which is disposed in front of the object array (1), as viewed in the direction of the detector array (7), a field lens (3), which is disposed in front of the object array (1) as viewed in the direction of the detector array (7), a light source (15), the radiation of which is coupled in by means of a beam splitter (8) between the field lens (3) and an objective (6), wherein the objective (6), together with the field lens (3), simultaneously images all pupils of the microlens array (2) onto the detector array (7).
16. (original) An arrangement as claimed in Claim 15, wherein the field lens (3) and a further lens (11) form a telescopic arrangement which illuminates the object array (1) with light from the light source (15).
17. (original) An arrangement as claimed in Claim 15, comprising a diaphragm (4a) disposed between the field lens (3) and the objective (6), wherein the beam splitter (8) is located between the diaphragm (4a) and the field lens (3).

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18. (original) An arrangement as claimed in Claim 15, wherein the field lens (3) and the objective (6) effect telecentric imaging of the pupil plane of the microlens array (2) onto the detector array (7).

19. (original) An arrangement as claimed in Claim 17, wherein one or more reflecting elements (17, 18) for folding the beam path for illumination and/or detection are provided between the field lens (3) and the diaphragm.

20. (original) An arrangement as claimed in Claim 15, wherein the object array (1) is slideable, at least vertically to the axis of illumination.

21. (original) An arrangement as claimed in Claim 15, wherein the light source (15) is intermittently switchable and a detection synchronized to the illumination clock, preferably a deferred detection, is possible so as to allow a time-dependent fluorescence measurement.

22. (original) An arrangement as claimed in Claim 21, comprising a flash lamp as the light source (15).

23. (original) An arrangement as claimed in Claim 15, wherein the microlens array (2) can be swiveled out of the beam path for observing the entire object array (1) and/or is exchangeable for adjustment to different measuring applications.

24. (original) An arrangement as claimed in Claim 15, wherein the light source (15) can be switched off for luminescence detection and/or a coupling element (8) for coupling in the radiation of the light source (15) can be swiveled out.

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25. (original) An arrangement as claimed in Claim 15, wherein a second detector array is disposed behind the object array (1) in the illumination direction for absorption measurement.

26. (original) Use of an arrangement as claimed in Claim 15 in a combined device for measuring at least one of the following phenomena on the object array (1); fluorescence, time-dependent fluorescence, luminescence, and absorption.

27. (original) The use of an arrangement as claimed in Claim 15 as a reader for

microtiter plates.

28. (New) A method for the optical evaluation of an object array, the method

comprising the steps of:

providing an object array for optical evaluation;

providing a detector array and a microlens array wherein said microlens array

is disposed in front of said object array;

providing a field lens disposed in front of the object array;

generating an excitation light with an excitation light source which is coupled in by means of a beam splitter between a field lens and an objective lens; and

simultaneously imaging all pupils of the microlens array onto the detector array by means of said objective lens together with said field lens.

FROM :

PHONE NO. : 7034184777

Sep. 30 2004 06:16PM P8

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02:10/04 19:00 FAX FOR JON GUSI EIC 2800

NO. 696 D06
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USPN 10/009,890
Docket No. 21195.PUS

REMARKS/ARGUMENTS

Claims 15-27 are pending in the application.

New Claim 28 has been added.

Claims 15-27 stand rejected.

Applicant is grateful to Examiner Lauchman for the courteous interview granted on November 12, 2003; wherein agreement was reached regarding claim 15 (see interview

summary). Applicants discussed the Johnson U.S. Patent No. 6,133,986 and pointed out

that Johnson did not teach that the objective together with the field lens, simultaneously

images all pupils of the microlens array onto the detector array.

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Docket No. 21195.PUS

THE REJECTION UNDER 35 U.S.C. § 102 (b)

Claims 15-24 stand rejected under 35 U.S.C. § 102 (b) as being anticipated by Johnson U.S. patent No. 6,133,986 for the reasons set forth in the outstanding office action. In the outstanding office action, the Examiner states that US 6,133,986 anticipates the subject matter of independent claim 15 as well as of dependent claims 16 through 19 and furthermore makes the embodiments defined in dependent claims 20 through 24 obvious.

The Johnson '986 reference shows in figures 1 and 2 a confocal imaging of a surface (6) onto a detector array (3) by means of a minilens array (2). Between the detector array (3) and the minilens array (2) there is provided a field lens. Light from a light source (9) is directed via a beam splitter (10) onto the minilens array (2) and the field lens which is in front of the minilens array (2). Therefore, the minilens array (2) is illuminated in total, i.e. all the minilenses are subjected to light from the light source (9). Between the minilens array (2) and the detector array (3) is a pinhole (7) in between two lenses so that the pupil of a single minilens (4) of the minilens array (2) is imaged to a respective spot (5) of the detector array (4). In capsule summary, the optics shown in figures 1 and 2 of the '986 patent perform confocal imaging by means of the pinhole (7), wherein the position and location of said pinhole decides which of the minilenses of the minilens array (2) is active regarding the confocal imaging. To scan the surface (6) the '986 patent displaces the pinhole (7) which is identified as a "projection aperture" in the '986 patent in a raster-like manner.

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Accordingly, it is clear from the '986 patent that scanning is inevitable to fully image the surface (6). Figures 1 and 2 clearly show the raised beam of the confocal imaging using a single one of the minilenses of the minilens array. Thus, the concept of scanning imaging by means of displacement of the pinholes (7) is present in all the embodiments of the '986 patent.

For the sake of simplicity and Example, the '986 patent does not show in figures 18 and 19 the beams of the confocal imaging but illustrates only the full illumination of the minilens array (2). Nevertheless, figures 18 and 19 are based on a scanning approach as well. The interpretation of figures 18 and 19 is conclusive regarding the scanning concept of the '986 patent and, therefore it is clear that the optics of the '986 patent will not image all pupils of the minilens array (2) onto the detector array (3) simultaneously.

The instant invention as defined in present claim 15 uses a concept different from that of the '986 patent in reading in parallel as well of a microtiter plate. To accomplish this, there is provided simultaneous imaging of all pupils of the minilens array onto the detector array via the objective and the field lens. Such simultaneous imaging is impossible using the optics of the '986 patent and contradicts the teaching disclosed therein, since the '986 patent is based on confocal imaging scanning which uses a single minilens for each scanning step.

Withdrawal of the rejection under 35 U.S.C § 102(b) is respectfully requested.

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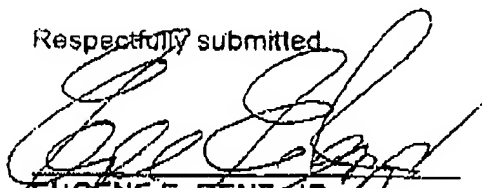
THE REJECTION UNDER 35 U.S.C. § 103 (a)

The rejection of Claims 25-27 under 35 U.S.C. § 103 (a) as being unpatentable over Johnson (6,133,986), and in view of Craighead (5,867,266) is respectfully traversed. The Examiner states that "Johnson '986 teaches everything as applied to Claim 15. However, the patent does not teach that the system is applicable of measuring absorption, fluorescence, and luminescence, and that it is used as a reader for microtiter plates. The patent to Craighead teaches an apparatus similar in structure (see Fig. 6) for measuring absorption, or reflection or fluorescence. It would have been obvious to use the system of Johnson to measure fluorescence because measuring fluorescence, luminescence, or absorption does not differentiate the claimed apparatus from the Johnson's apparatus satisfying the claimed structural limitations."

For the reasons set forth above under the 35 USC 102(b) argument, the combination of the '986 patent with the '266 patent can not render obvious claims 25-27, since the '986 reference does not show simultaneous imaging of all the pupils.

Telephone:
(610) 565-6090
Facsimile:
(610) 566-9790
P.O. Box 2056
205 North Monroe Street
Media, PA 19063-9056
FAX 610-566-9790

Respectfully submitted,


EUGENE E. RENZ, JR.
Attorney of Record
Registration No. 19,557

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